FIG. 1

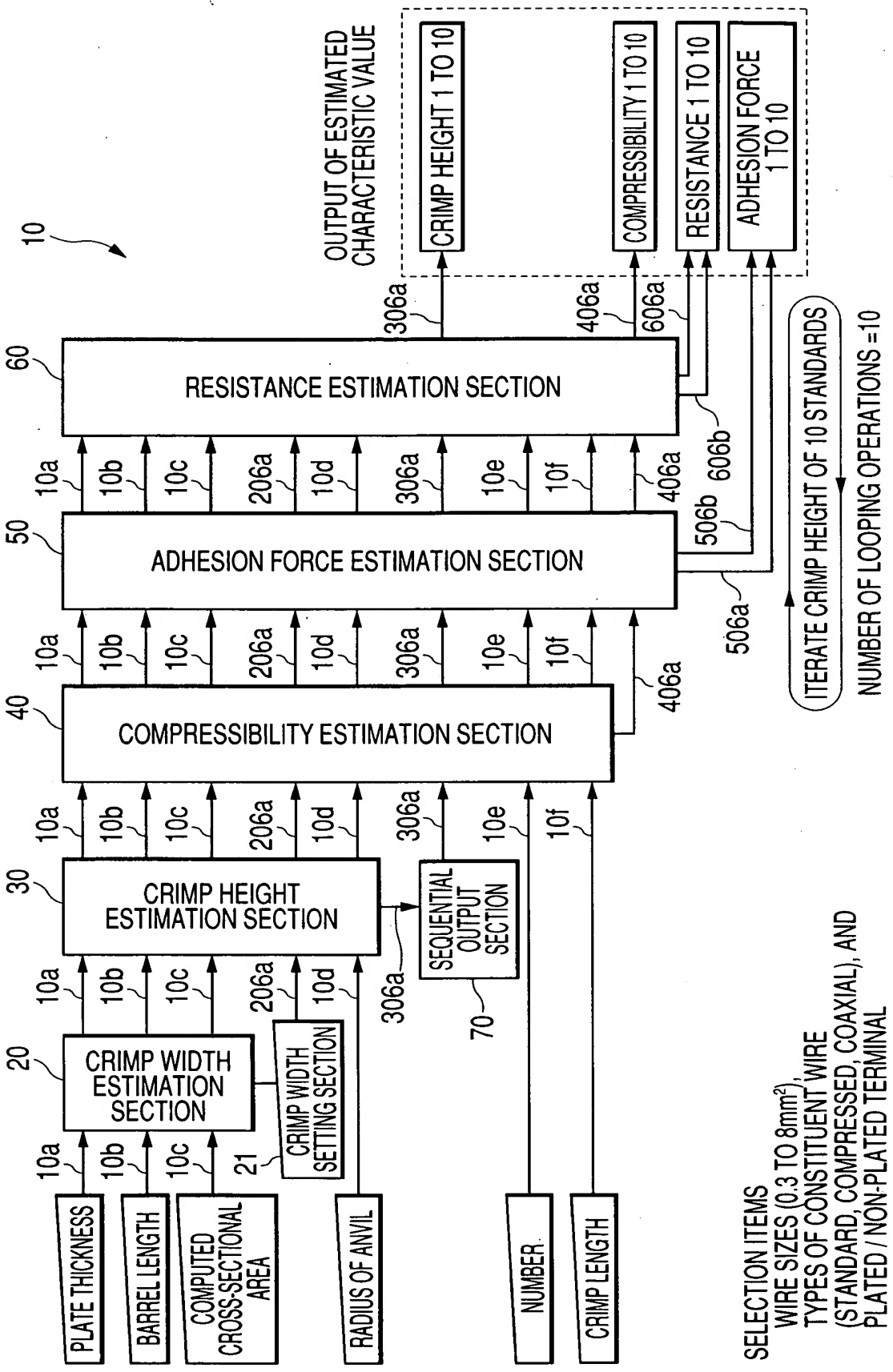


FIG. 2A

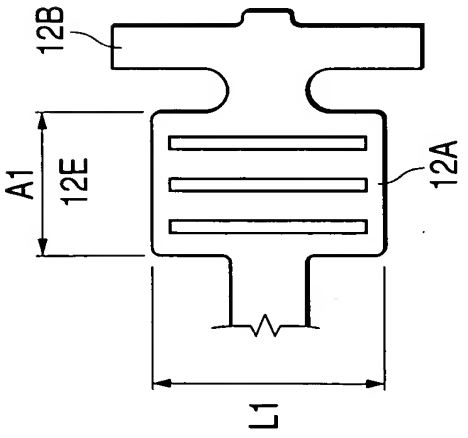


FIG. 2B

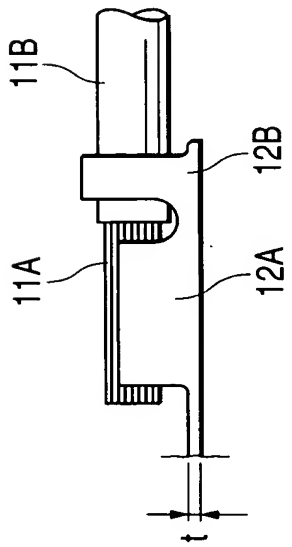


FIG. 2C

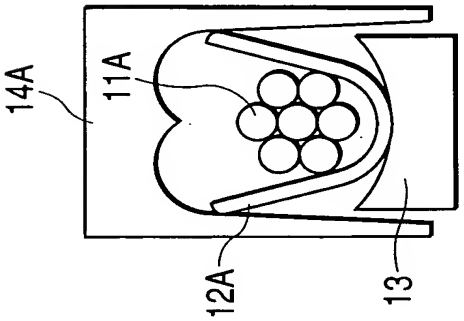


FIG. 2D

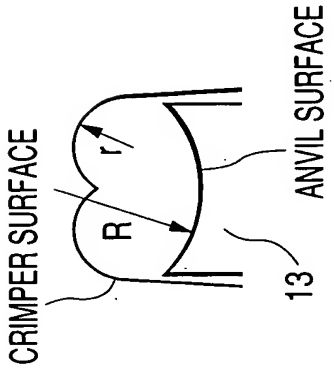


FIG. 2E

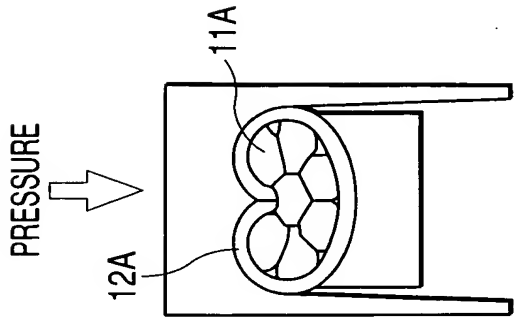


FIG. 2F

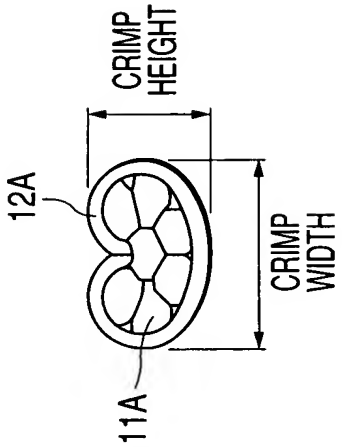


FIG. 3

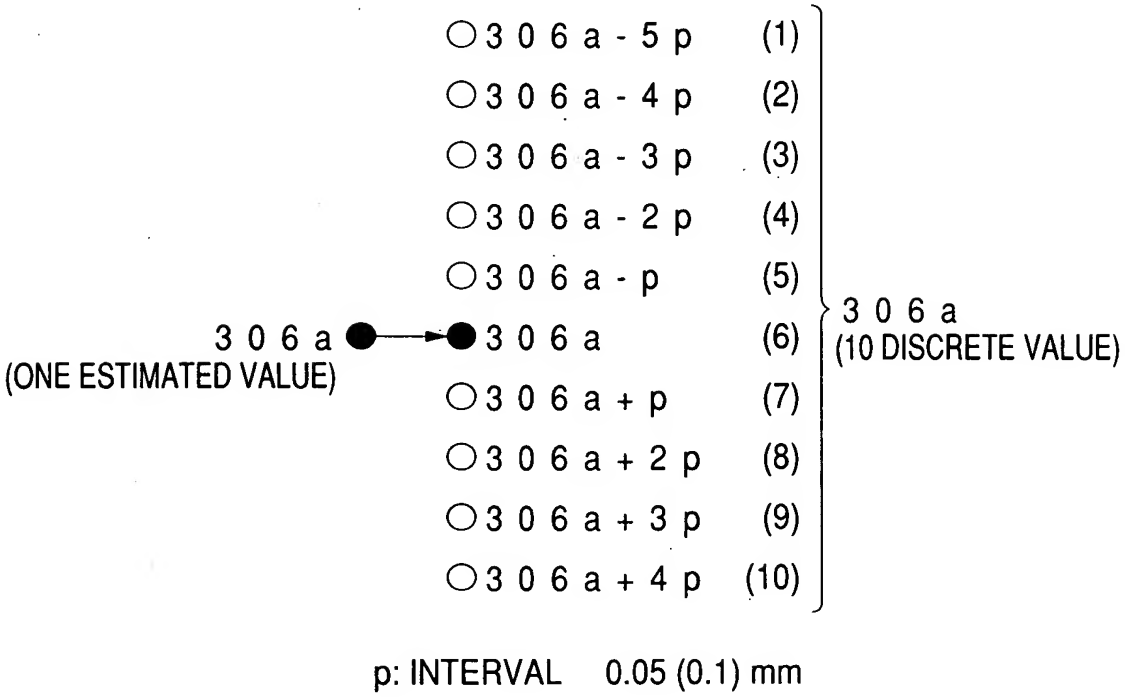

3 0 6 a - 5 p (1)
3 0 6 a - 4 p (2)
3 0 6 a - 3 p (3)
3 0 6 a - 2 p (4)
3 0 6 a - p (5)
3 0 6 a (6)
3 0 6 a + p (7)
3 0 6 a + 2 p (8)
3 0 6 a + 3 p (9)
3 0 6 a + 4 p (10)
3 0 6 a
(ONE ESTIMATED VALUE)
3 0 6 a
(10 DISCRETE VALUE)
p: INTERVAL 0.05 (0.1) mm

FIG. 4

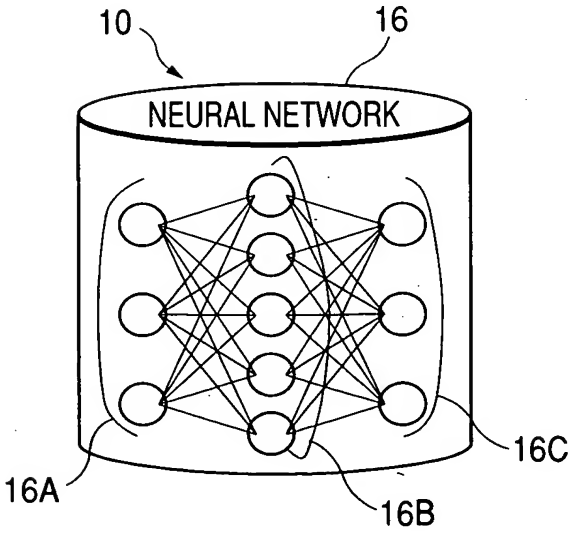

10
16
NEURAL NETWORK
16A
16B
16C

FIG. 5A

[REQUIREMENTS FOR ESTIMATION]		LIMIT VALUES		
WIRE TYPE	AVSS-f	TERMINAL "t"	0.44mm	
WIRE SIZE (NOMINAL SIZE)	0.75	L1	8.00mm	
TERMINAL PLATING, PLATED	YES	A1	4.00mm	
NEURO ESTIMATION		COMPUTED CROSS-SECTIONAL AREA		0.7895mm^2
TYPE CRIMP WIDTH	2.77mm	NUMBER OF CONSTITUENT WIRES		19ea
CRIMP HEIGHT	1.44mm	RADIUS OF ANVIL	2.40mm	

FIG. 5B

[ESTIMATION RESULTS]

NO.	CRIMP HEIGHT	COMPRESSIBILITY	ADHESION FORCE	RESISTANCE	CRIMP SHAPE
1	1.19	66.09	11.75	0.07	
2	1.24	69.54	12.46	0.09	
3	1.29	73.34	13.14	0.12	
4	1.34	77.27	13.75	0.16	
5	1.39	82.31	14.27	0.19	
6	1.44	87.71	14.68	0.24	
7	1.49	93.90	14.94	0.31	
8	1.54	101.04	15.01	0.42	
9	1.59	109.26	14.70	0.61	
10	1.64	118.64	13.57	0.98	

FIG. 5C

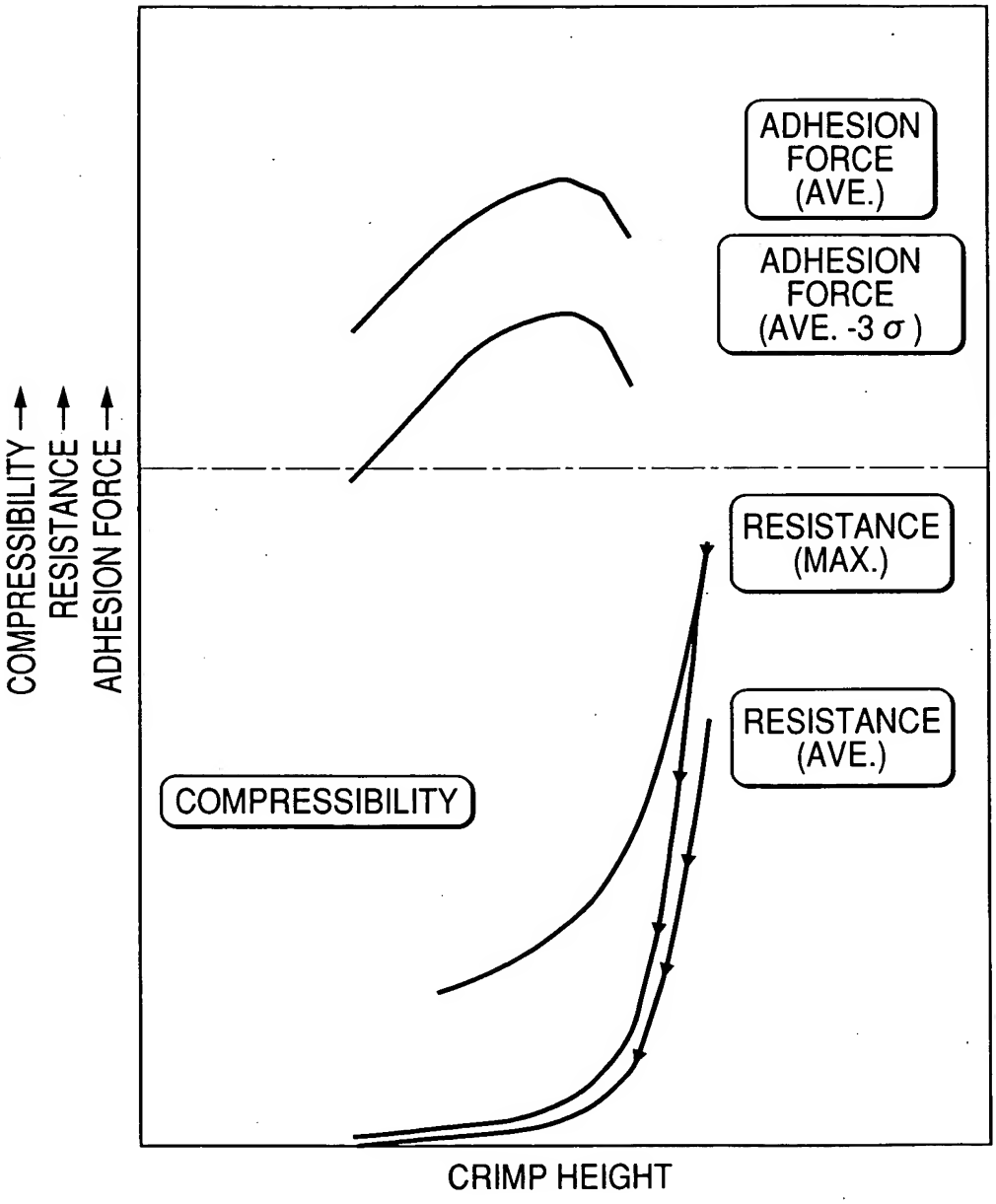

ADHESION FORCE (AVE.)
ADHESION FORCE (AVE. -3 σ)
RESISTANCE (MAX.)
RESISTANCE (AVE.)
COMPRESSIBILITY
COMPRESSIBILITY
RESISTANCE
ADHESION FORCE
CRIMP HEIGHT

FIG. 6

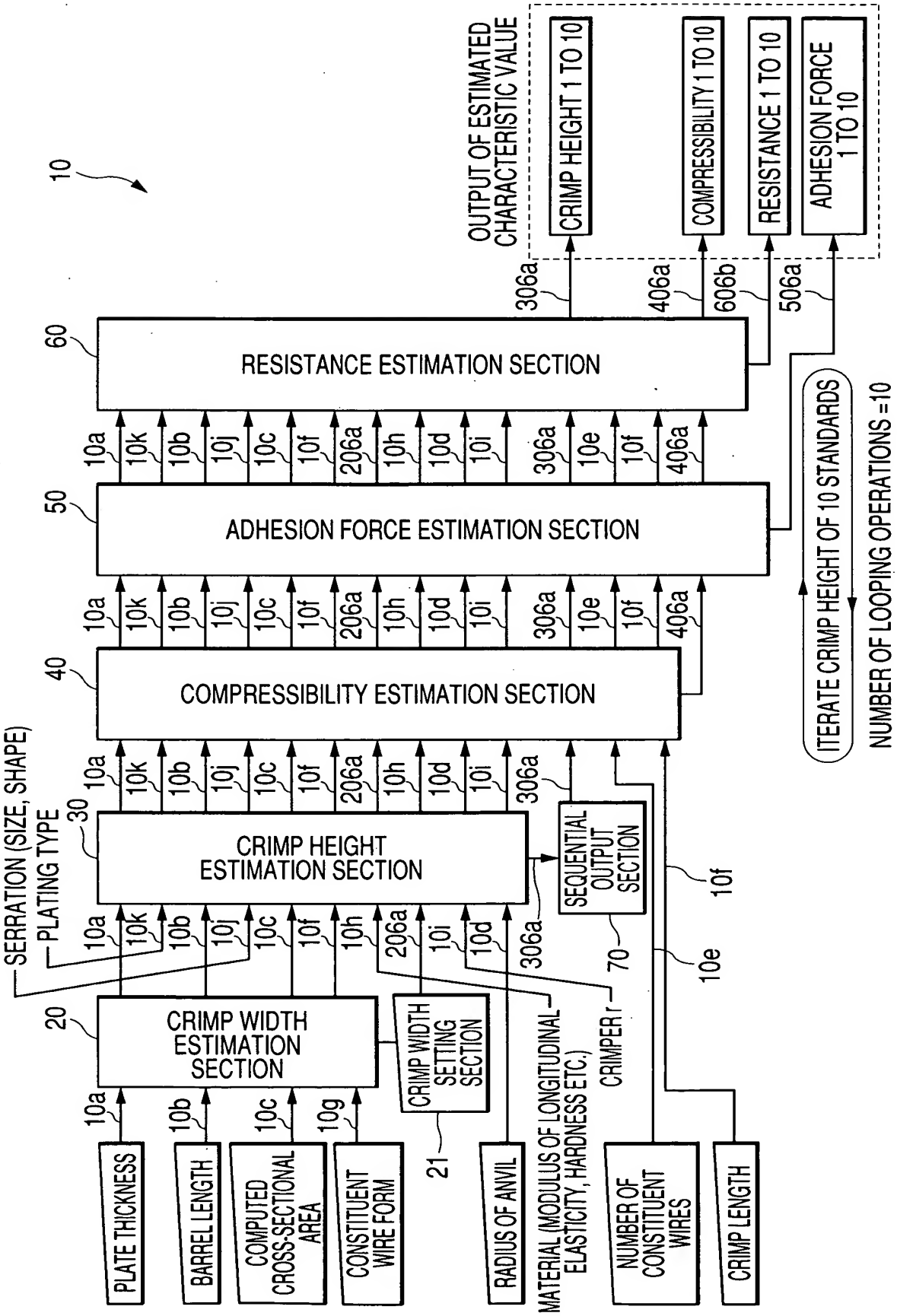

10
OUTPUT OF ESTIMATED CHARACTERISTIC VALUE
CRIMP HEIGHT 1 TO 10
COMPRESSIBILITY 1 TO 10
RESISTANCE 1 TO 10
ADHESION FORCE 1 TO 10
306a
406a
606b
506a
60
RESISTANCE ESTIMATION SECTION
50
ADHESION FORCE ESTIMATION SECTION
40
COMPRESSIBILITY ESTIMATION SECTION
30
CRIMP HEIGHT ESTIMATION SECTION
SEQUENTIAL OUTPUT SECTION
70
20
CRIMP WIDTH ESTIMATION SECTION
CRIMP WIDTH SETTING SECTION
21
ITERATE CRIMP HEIGHT OF 10 STANDARDS
NUMBER OF LOOPING OPERATIONS =10
SERRATION (SIZE, SHAPE)
PLATING TYPE
PLATE THICKNESS
BARREL LENGTH
COMPUTED CROSS-SECTIONAL AREA
CONSTITUENT WIRE FORM
RADIUS OF ANVIL
MATERIAL (MODULUS OF LONGITUDINAL ELASTICITY, HARDNESS ETC.)
CRIMPER r
NUMBER OF CONSTITUENT WIRES
CRIMP LENGTH

FIG. 7

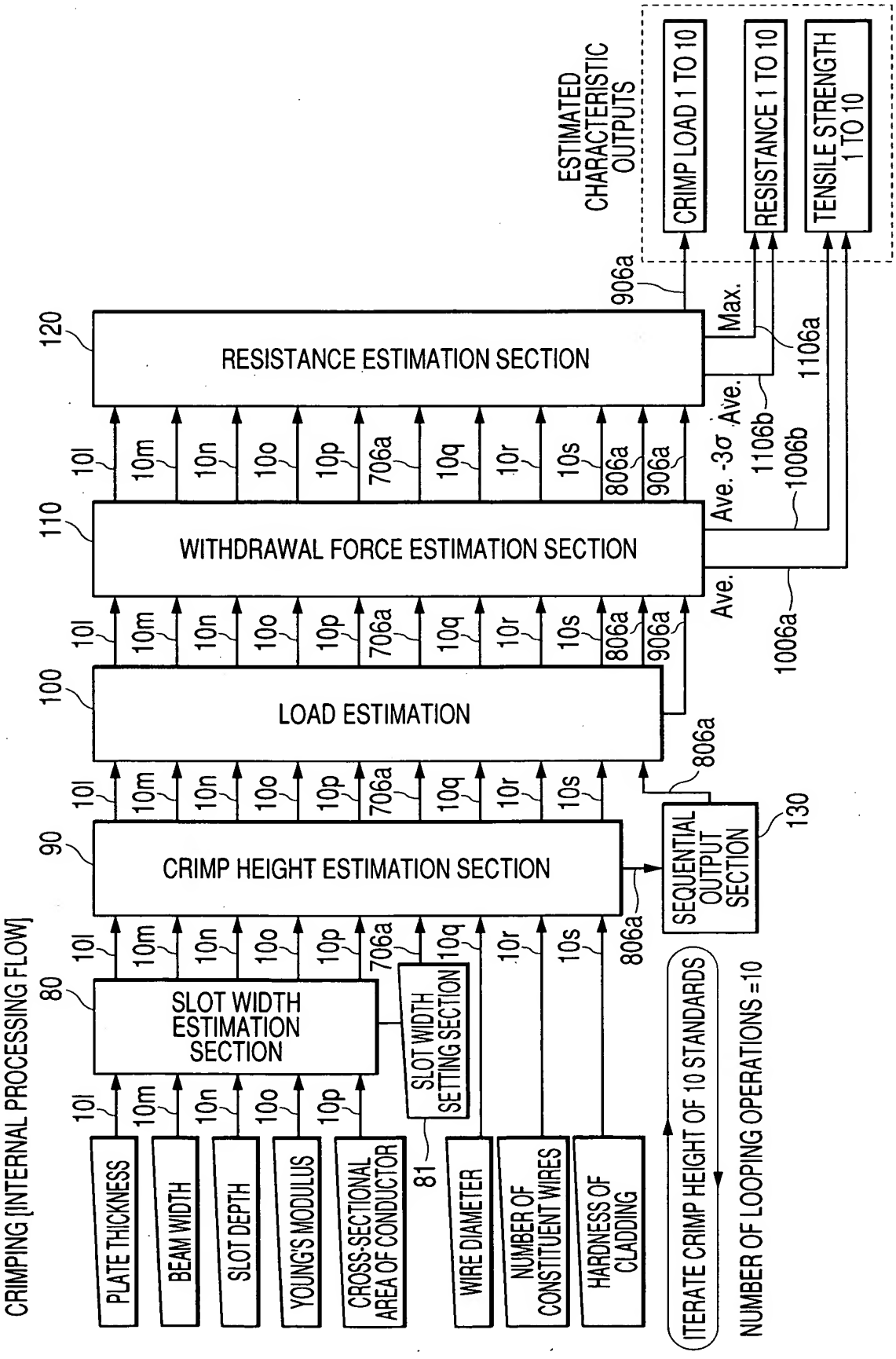

CRIMPING [INTERNAL PROCESSING FLOW]
PLATE THICKNESS
BEAM WIDTH
SLOT DEPTH
YOUNG'S MODULUS
CROSS-SECTIONAL AREA OF CONDUCTOR
WIRE DIAMETER
NUMBER OF CONSTITUENT WIRES
HARDNESS OF CLADDING
81
SLOT WIDTH SETTING SECTION
80
SLOT WIDTH ESTIMATION SECTION
90
CRIMP HEIGHT ESTIMATION SECTION
100
LOAD ESTIMATION
110
WITHDRAWAL FORCE ESTIMATION SECTION
120
RESISTANCE ESTIMATION SECTION
130
SEQUENTIAL OUTPUT SECTION
ITERATE CRIMP HEIGHT OF 10 STANDARDS
NUMBER OF LOOPING OPERATIONS =10
ESTIMATED CHARACTERISTIC OUTPUTS
CRIMP LOAD 1 TO 10
RESISTANCE 1 TO 10
TENSILE STRENGTH 1 TO 10
Max.
Ave.
Ave. -3σ
Ave.
101
10m
10n
10o
10p
706a
10q
10r
10s
806a
906a
1106a
1106b
1006b
1006a

FIG. 8A

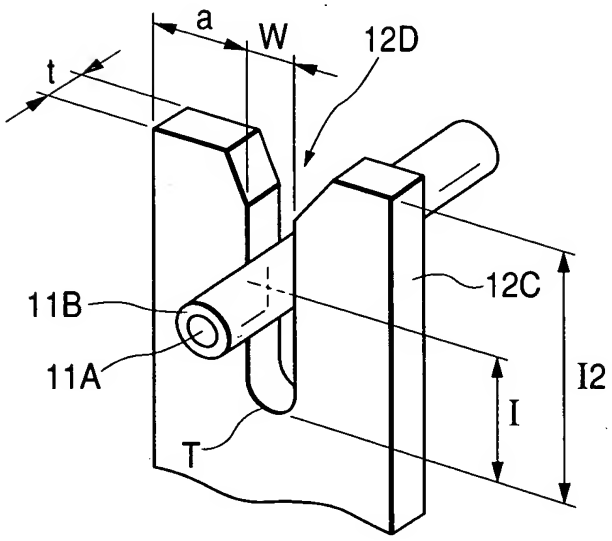


FIG. 8B

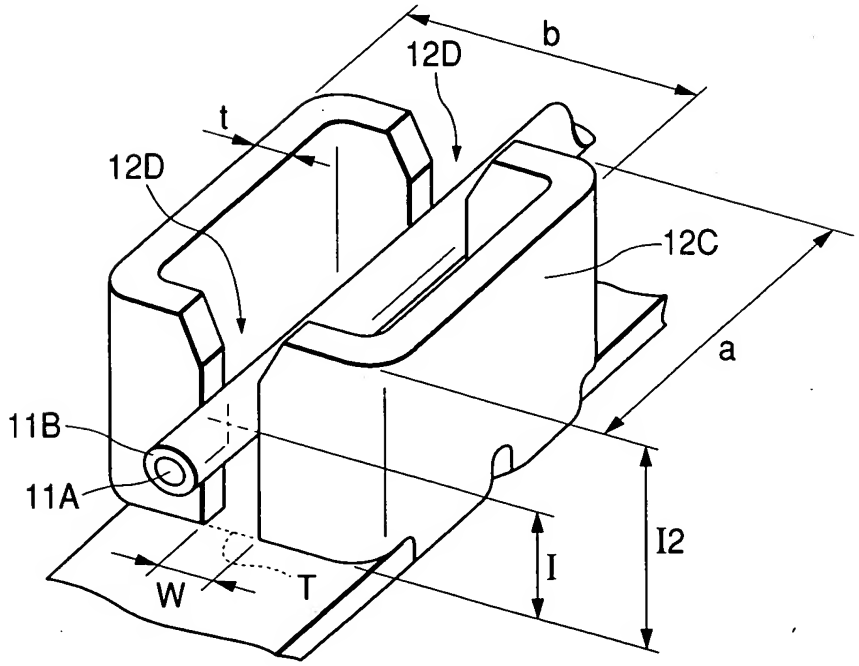


FIG. 9

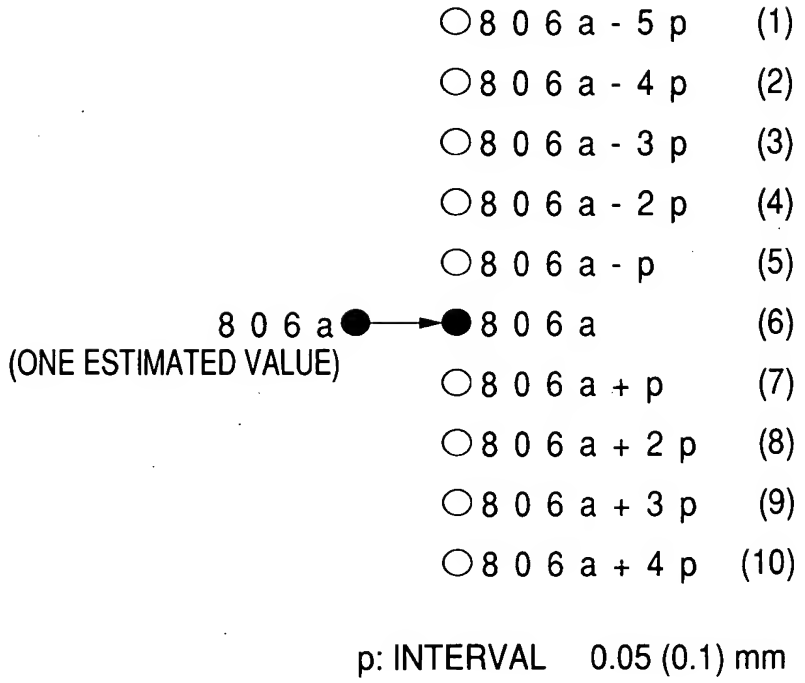

○8 0 6 a - 5 p (1)
○8 0 6 a - 4 p (2)
○8 0 6 a - 3 p (3)
○8 0 6 a - 2 p (4)
○8 0 6 a - p (5)
8 0 6 a
(ONE ESTIMATED VALUE)
●8 0 6 a (6)
○8 0 6 a + p (7)
○8 0 6 a + 2 p (8)
○8 0 6 a + 3 p (9)
○8 0 6 a + 4 p (10)
p: INTERVAL 0.05 (0.1) mm

FIG. 10A

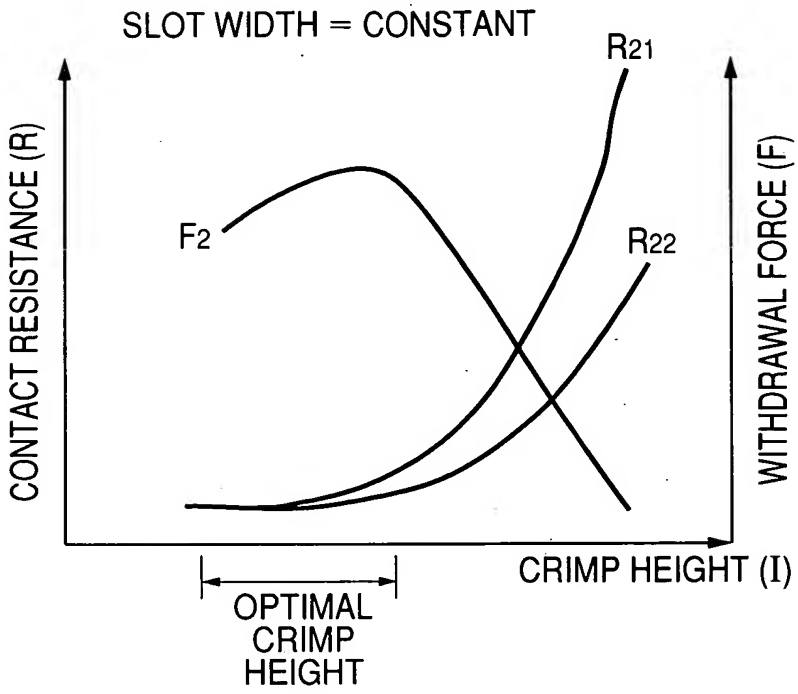


FIG. 10B

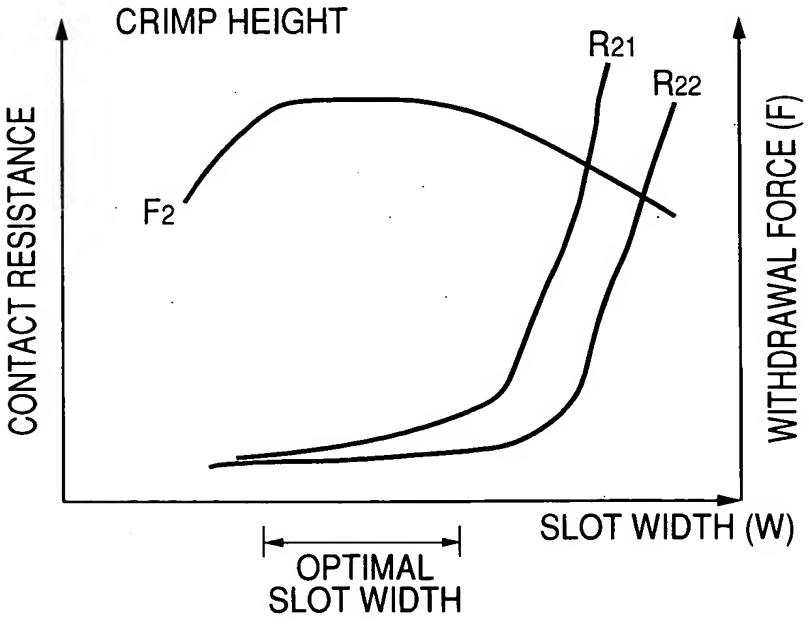
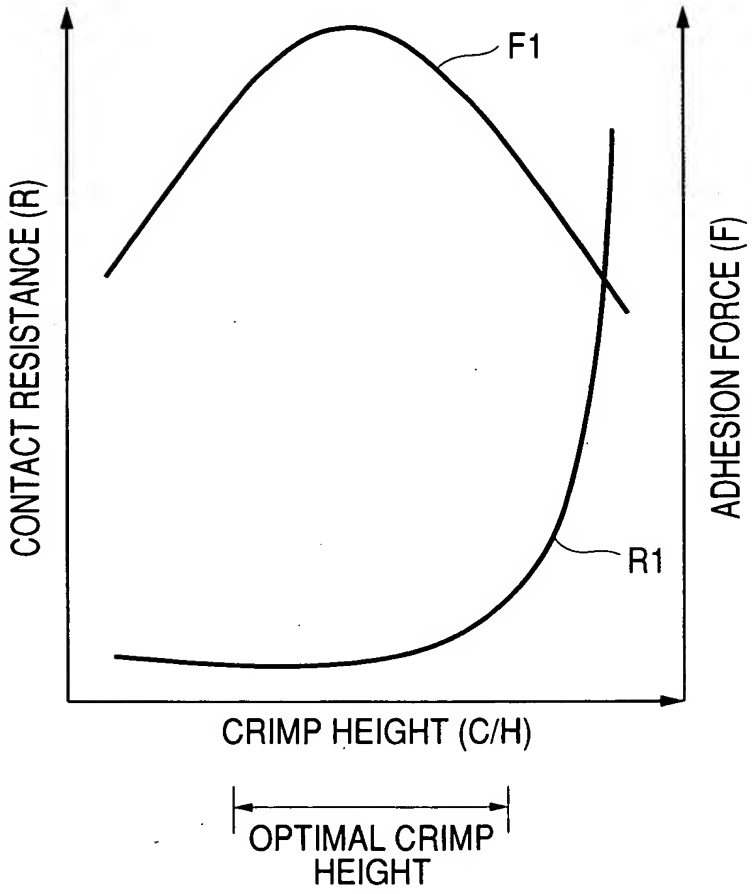


FIG. 11


F1
R1
CONTACT RESISTANCE (R)
ADHESION FORCE (F)
CRIMP HEIGHT (C/H)
OPTIMAL CRIMP HEIGHT